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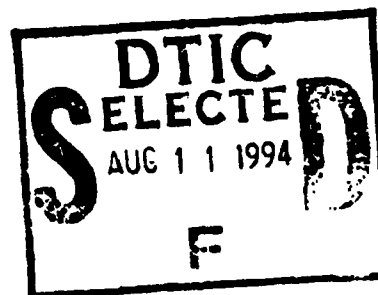
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THE CHANGING ROLE OF AEROSPACE POWER IN THE 21ST CENTURY

by  
Shawn C. McElroy  
Lt Col, USAF

A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE CURRICULUM  
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## ABSTRACT

TITLE: The Changing Role of Aerospace Power in the 21st Century.

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Despite the end of the Cold War, the world has not become more peaceful as many had hoped. Regional turmoil and violent hotspots have become more prevalent and the number of potential threats to US vital interests has increased. In response to this "centrifugal whirlwind" of nationalism, ethnic strife and religious militancy, the international community is increasingly intervening under the auspices of the UN as peacekeepers or peacemakers. American leadership and military capability has proven instrumental as recently demonstrated in Iraq and Somalia.

The future will prove no less challenging as the nature of conflict becomes less conventional and more ambiguous. Blurring between peace and war will be more pronounced as peacemaking, peacekeeping, and humanitarian missions become more of the norm. Aerospace power has a robust future as a key element of American strategy if there is a realistic doctrinal framework to match these new challenges of the 21st century.

## BIOGRAPHICAL SKETCH

Lt. Col. McElroy is a Command Pilot and has compiled 2500 flying hours in fighter aircraft while serving in assignments in the United States, Europe and Tunisia. While flying in both operational and training units, he has been an instructor pilot, flight evaluator, operations officer and a squadron commander. His staff experience was gained at Tactical Air Command where he served as an F-16 Program Manager and the Deputy Director of the Commanders Action Group. His military awards include the Meritorious Service Medal (4 OLC) and the Air Force Commendation Medal. Lt. Col McElroy holds a MPA degree from Golden Gate University and is currently attending the Air War College, class of 1993.

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"But it will be interesting to watch the development of the great powers and the battle of wits. Will it be as it always has been, that they all, every one of them, will not learn from the past and will continue to make the old mistakes again and again."

General Karl Loller, Luftwaffe, 1945

## CHAPTER I

### INTRODUCTION

Airpower advocates today focus on the successes of Desert Storm and the validity of the Joint Air Force Component Commander (JFACC). A broader dialog should consider the Post-Cold War environment, with the first opportunity in decades for the United States to examine its national security objectives and the strategy required to meet those objectives within the new international framework. Within this New World Order, the Air Arm must evaluate its roles and capabilities to support a new military strategy, unhampered by conceptions or limits carried over from past Cold War threats. Without this intellectual investigation, the USAF may find itself in the 21st century, as it has twice in the past, prepared once again for a different battle than it must fight.

The air war in both Korea and Vietnam raised fundamental issues conflicting with USAF conceptions of how war should look. Adaptation was slow and hesitant; the US lost one of those wars and tied the other....Nevertheless, air power requires, as does all military power, a coherent and realistic doctrinal framework; we did not have that framework in 1965. The question now is, Will we have that broad doctrinal framework in the post-Gulf war era? <sup>1</sup>

It is clear the Post-Cold War environment will require different priorities for America's national security and that new dominant factors will shape our security strategy. Air Warriors must look to the future and ask fundamental questions about the future role of

aerospace power. To this end, pertinent questions about the new strategic landscape, threats that loom on the horizon and finally technological trends must be asked. The answers to these questions may surprise some airpower strategists as the demands for operations short of war will be the dominant theme. As peace-making and peace-keeping become central missions for the future, the USAF will require a stronger doctrinal foundation than currently exists for these activities.



## CHAPTER II

### THE NEW STRATEGIC LANDSCAPE

Still the question recurs 'can we do better?' The dogmas of the quiet past, are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew, and act anew.<sup>2</sup>

Although Abraham Lincoln spoke these words long ago, his message applies today. Seldom in US history have the forces of change dominated as today. The speed of the Soviet Union's collapse, the end of the Cold War, and the reunification of Germany were undreamed just a few years ago. General Colin Powell, Chairman of the Joint Chiefs of Staff reflected that,

Three years ago,...the Berlin wall still stood. American strategic forces were on constant alert, and more than 300,000 US troops were in Europe, ready to repel any attack by the Warsaw Pact. Today the Cold War is over. The Warsaw Pact is dissolved. The Soviet Union has ceased to exist. Our strategic bomber force is no longer on alert. Nuclear and conventional arms control agreements have been concluded, eliminating entire classes of nuclear weapons and thousands of tanks, armored vehicles and artillery pieces. Over a hundred thousand troops have come home from Europe.<sup>3</sup>

#### Outdated Framework

For the last fifty years, the United States sought its security and defined vital interests through the context of the ideological struggle with the USSR. Perceiving communist expansion as the preeminent threat, American military might focused on global containment. With the fall of the Berlin Wall also fell Soviet

aspirations of world domination. Communism no longer holds relevance and no longer dominates America's national security strategy.

Although it is true the "competing sponsorship" between East vs West is gone, the game still goes on as the world is neither less dangerous nor less violent. Former Secretary of Defense Mr. Dick Cheney described these changes as "momentous and fundamental shifts in the strategic environment."

The world is still a dangerous place....It is true that the United States no longer faces the threat of global war beginning in Europe, a conflict that might have resulted in a nuclear confrontation between superpowers. But we do face serious regional contingencies -- threats that may be triggered by any number of events, are difficult to identify in advance, and could be made more dangerous by the spread of high-technology weapons. As a result, the challenges of the next few years are likely to be complex and difficult.<sup>4</sup>

#### Inadequate Strategy

Without the Russian Bear, the accompanying Cold-War framework of containment is no longer applicable and the difficult task of identifying illusive, ill-defined threats of the future must begin. A recent US Military Assessment said,

The decline of the Soviet threat has fundamentally changed the concept of threat analysis as a basis for force structure planning...but the real threat we now face is that of the unknown and uncertain. The threat is instability and being unprepared to handle a crisis or war that no one predicted or expected"<sup>5</sup>

The impact of this fundamental shift in threat analysis can be seen as the national decision-makers struggle with developing an appropriate strategy to match the resources the country is willing to dedicate to defense. Without the "Evil Empire" as an easily identifiable and justifiable threat, it becomes even more problematic when balancing America's global vision to strategy and resources. In

the future, the answer to the question of who is the threat may not be so easily answered. As shown earlier, the new strategic landscape does not lend itself to identifying the next potential threat to US national interests.

Simultaneously, there is a new force rising within America suggesting that the threat to our nation's security has decreased significantly and therefore dramatic reductions in defense spending are justified. Rep. Ronald V. Dellums, Chairman of the House Armed Services Committee, argued recently that America needs to define a new strategy for the military and believes, "...the intellectual and evidentiary basis that had been offered to support the cold-war strategy has melted away."<sup>6</sup> Rep. Dellums further makes the case that any strategy for the future must meet the criteria of solvency.

Our military budget must start from the point of view that it addresses real, defined and ascertainable - not hypothetical - threats. It must be based on a proper assessment of the strategy that will be employed to face those legitimate threats. It must be of a scale sufficient, and no more so, to deploy forces and procure materiel to implement that strategy.

This question of solvency is central to the development of a coherent and practical strategy for the future. Under this current pressure to downsize the military and to reduce US commitment on defense spending, unclear objectives or overstated ambitions may soon exceed the resources the nation is willing to spend on military power. Today, opportunity exists for a greater and freer world as democracy is the most powerful political force at work, but, America must seek its own security objectives within the framework of this opportunity.

The trend is quite the opposite as American national security policy is rapidly losing any semblance of coherence or consensus.<sup>7</sup> As

the remaining superpower there is often pressure for the United States to intercede in each international crisis as the "world's policeman, gendarme, or nanny" depending on the circumstances. Increasingly brought to the forefront by the world's media, crisis even in the most remote part of the globe is projected into the American living room where public outcry often demands US action. National strategy is in the danger of becoming myopic and developing the focal length of a TV camera held in the hands of a CNN reporter. Without a clear consensus of America's vision and the future national strategy to achieve it, the risk of costly entanglements with questionable outcomes becomes quite distinct.

#### New International Actors

Central to these challenges will be for the US to recognize both the emergence of new international actors and the resultant shifts in the nature of global power. The Third World and the broken empire of the Soviet Union will challenge international security, as many states struggle with reform and seek a place in the global community.<sup>8</sup> In addition, there are also emerging non-nation state actors who are playing a more powerful and influential role in the international scene.

Global entities such as non-government agencies and supra-national corporations control resources and influence events much greater than many of the world's smaller nation-states. International banks, trade associations, transnational lobbies like OPEC and Greenpeace, and world news services like CNN and the BBC all act to shrink the world and diminish the salience of national borders.<sup>9</sup>

Mixed into this group of new and competing actors is the growing interdependence of the global community. Even as the sole remaining military superpower, the US is not immune to the events and actions of other nations. Across the spectrum of world activities, including collective security, economic dependence and the earth's environment, globalization and interdependence are more prevalent than in the past.

### International Intervention

It appears that without the bi-polar Cold War framework, which often acted to subdue regional or nationalistic furors, the role of world organizations such as the UN to restore stability must grow. Ideally, through the auspices of world organizations such as the UN, the US could foster world stability on a scale unattainable in the Cold War era. As argued by a recent bipartisan commission in a memorandum to then President-elect Clinton,

Regional and internal threats to peace will be a staple on the world scene in the years ahead...multilateral and collective action will be preferable to unilateral American responses. Unless the United States relies more on collective solutions to military challenges, they are not likely to be dealt with at all. Greater American support for both UN peacekeeping and peacemaking efforts is a national security objective."<sup>10</sup> (emphasis added)

Most recently, Boutros Boutros-Ghali, Secretary General of the United Nations, seemed to confirm this position when he said, "Peacekeeping is the most prominent UN activity" and referred to it as growth industry. Figures bear this out when considering the UN has performed over 14 new operations since 1988.

International peacekeeping forces most often require military capability that can only be provided by America. Frequently, these

operations short of war will rely heavily on aerospace power to perform a multitude of tasks. Even today US military forces are involved in Iraq, Somalia and Bosnia and are engaged in a wide range of activities to enforce peacekeeping missions. The former Yugoslavia has become the UN's largest peacekeeping commitment ever and is still far from a peaceful solution. Escalation of this ethnic conflict appears only a matter of time as cease-fire after cease-fire fails and the likelihood of even more UN and American military participation becomes greater.

#### Humanitarian Operations

The "recent past has seen an unprecedented number of situations in which US armed forces were involved in humanitarian missions." To support this claim the 1992 Joint Military Net Assessment included numerous examples: Operation Provide Hope, transporting food and medical supplies to the Commonwealth of Independent States; Operation Provide Comfort, safeguarding and providing food and shelter for Kurds in northern Iraq and Operation Eastern Exit, rescuing US, Allied and friendly citizens from the dangers of civil war in Somalia. In each case, the military provided unique capabilities for humanitarian assistance.

Highlighted in this effort is the understanding that armed forces can provide "sanctuaries" so that aid is provided to citizens whether the host government is willing or not. The implied use of force is underscored and suggests another activity short of war that military strategists must be prepared to accomplish. It is the view of many that the call for US armed forces to conduct humanitarian missions will be even more common in the future than in the past.

## CHAPTER III

### ARMED AND DANGEROUS.

#### Dormant Forces Revived



...and in international news, the smallest country in the world today split up into two even smaller ones

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Most striking and potentially dangerous in the Post-Cold War era is the unleashing of the forces of fragmentation under the guise of nationalism. There already existed by 1989 some 4,000 ethnic minorities who do not accept their present nation-state affiliation. Non-acceptance of the nation-state fuels perhaps 20 armed conflicts in 1993 and is the greatest threat to world peace."<sup>11</sup> Fragmenting political, religious and ethnic forces are now increasingly divisive on national identities. The New Republic Quarterly assesses that "in only two short years, the hopes of Berlin's fallen wall have been transformed into the rubble of Babel by nationalist explosions."<sup>12</sup> Even worse, historian John Lukacs has cautioned, "...the most powerful political force in the world is nationalism still. ... Here and there it seems that wars among races might now succeed the wars of nations; but that awful prospect has not yet crystallized worldwide, and one hopes that it won't."<sup>13</sup> These renewed and powerful forces are also transforming Central Asia, Central Europe and the Middle East. Nationalism has left the post-Cold War world smoldering with hot wars;

the international scene is little more unified than it was at the end of World War I.

Most frustrating, this is a threat to peace that often confounds the conventional military responses of the Cold War era, as is plain from the year-long crisis in Bosnia. As that crisis continues, public outcry demands international action to end the horror of "ethnic cleansing" and restore peace. It is this new role of peacemaking that defies the wisdom of conventional warfare and where the current discussions of "hyperwar" fall short.

### Fears of Fundamentalism

If violent nationalism were not enough to concern US security strategists in the future, add the menace of militant fundamentalism that threatens many parts of the world. The most vivid example of militant fundamentalism exists in the Middle East where groups such as the Palestinian Hamas or the Islamic Jihad sponsor violence. US News & World Report states, "Fundamentalism claims to be a religious cure-all for the economically desperate or politically alienated; promising a rigid Islamic state with no room for outside thought and scant room for 'outsiders,' it is itself a political malady threatening the Islamic world from Morocco to Muscat."<sup>14</sup> In the hands of zealot leaders, these new "expressions of religious fundamentalism are fractious and pulverizing, and never integrating."<sup>15</sup> Exploding in the Israeli-occupied West Bank, Egypt and Algeria, to name a few, these tinder box conflicts often flare and threaten to engulf entire regions in their flames. What are American interests in these conflicts? What strategy will be appropriate? What type of military capability will be needed?



The triumphs of the past and solutions of today are not suitable for the problems of tomorrow. Out of the ashes of the Cold War rise new challenges and different problems that the US must meet if it is to maintain its premier position in the new world order. There can be few with greater importance than designing a relevant national strategy and a complementary military strategy to cope with this new and evolving international security structure.

### New World with Teeth

One of the most terrifying aspects of the changing new order is the unprecedented proliferation of Weapons of Mass Destruction (WMD), a threat that clearly concerns US national security strategists. By the end of the 1990s, many regional powers will not only possess WMDs, the means to deliver them over long distances, and without an effective deterrent, but also the will to use them. One assessment stated, It has become apparent that without a concerted and effective international effort not only to halt proliferation but also to destroy existing stockpiles, the battlefield of the future will include the threat of these weapons." 16

Even more problematic for military planners in addressing the proliferation threat is the added dimension of state sponsored or internationally-organized terrorism.

Although terrorism has been practiced since before the dawn of recorded history, it has never constituted the worldwide threat it does today. The proliferation of arms and the very real potential for nuclear terrorism combine with the immediate worldwide mobility and highly sophisticated technology to put terrorism near the top of threats that must be effectively countered. 17

Unfortunately, the US response to terrorism has generally been reactive and most often ineffectual.

The brief moment of national euphoria that resulted from the interception of the aircraft carrying the perpetrators of the Achille Lauro affair in 1985 and the bombing of Libya in 1986 cannot obscure the fact that America's own war on terrorism has been characterized primarily by a national sense of helplessness and rage during and after each incident.<sup>18</sup>

Fed by forces such as Islamic fundamentalism, state sponsored groups will likely expand their attacks against US interests as the seizure of the American Embassy in Iran and the bombing of the Marine Headquarters in Beirut vividly demonstrate. It also must be recognized that international terrorists will increasingly support operations within the US.

#### US Vulnerability

The massive bomb that rocked the World Trade Center on February 26, 1993, not only illustrates our vulnerability but also marks a turning point in the willingness and the capability of terror groups to operate within the US. Until this recent bomb attack, the US homeland was relatively inaccessible to many of the terrorist organizations that have threatened other nations. Traditionally, America has felt secure within its borders but, as this recent attack shows, American borders are extremely susceptible to penetration by terrorists. Unfortunately, this recent successful attack may only invite even more attempts in the future.

We already know "some nations are actively fostering instability by sponsoring regional or international terrorist groups whereas other nations are victimized by the actions of terrorist organizations within their borders."<sup>19</sup> More worrisome, there are state-sponsored

"terrorists who use terrorism as a strategic weapon" to achieve their ends. The shock waves generated by the bombing of Marine Headquarters in Beirut largely destroyed a crucial aspect of US Middle Eastern policy.<sup>20</sup>

There is a growing element that believes the services must take more of the responsibility of developing the doctrine and forces to combat terrorism. Former Secretary of the Air Force Verne Orr most clearly stressed the crucial importance for doctrine in discussing the different challenges now faced.

A third challenge to our military leadership is to make sure doctrine keeps pace with the evolving threat. We need only to go back in history to illustrate that we must never again prepare to fight 'the last war.' Future warfare may not exist in the traditional sense. It may be nothing more than well-organized and coordinated terrorism, perpetuated by highly dedicated and heavily armed terrorists on a mass scale.<sup>21</sup>

Faced with this reality, it is a national security imperative that America form a strategy and that air power develop the doctrine and capabilities to attack this growing menace effectively.

## CHAPTER IV

### NEW ROLE FOR AEROSPACE POWER

#### A Historian's Caution

The major lesson often repeated about the success of the Gulf War was the overwhelming contribution of technology and the payoff from the large US investment in research and development of its various weapon systems. There is little doubt the US brought to bear on Iraqi forces capabilities from space in communication, navigation and surveillance that gave the coalition a total advantage in their ability to see, hear, talk and move over the battle theater. New weapon platforms with precision weapons, such as the stealth fighter in the air or Abrams A1A tank on the ground, were decisive in combat and when combined with clearly superior leadership provided the coalition with unequivocal military victory.

For airmen the effect of the victory was even more pronounced, as air power played a decisive role in the defeat of Saddam Hussein. The promises of the air prophets such as Billy Mitchell were finally at hand and the future of aerospace truly seems robust. Current air power strategists such as Col. John A. Warden proclaim that "this victory provides the strategic model for American operations well into the twenty-first century."<sup>22</sup>

History however, has seen many a proclamation fall short and does offer a caution. Phillip A. Crowel's catechism warns of the danger of making simple historical analogies when it asks, "Does today's strategy overlook points of difference and exaggerate points

of likeness between past and present?" Certainly no one could argue that the events leading up to the Gulf air campaign, such as the Desert Shield build up, the lack of strategic vision by Saddam Hussein and the dismal performance of the Iraqi Air Force, are not critical to the assessment. For this reason, it would seem plausible, to regard the lessons from Desert Storm as operationally important, but at the same time not necessarily universally applicable for the conflicts of the 21st century.

### "Spoils" of War

The success of USAF operations and its precision-guided munitions (PGM) has validated the maturity of air power and the dominate role it can play in war. Ironically, there are several issues that detract from this glowing success in the Persian Gulf and will require attention by future air strategists. Collateral damage to civilian personnel and property, long term destruction of a nation's critical infrastructure and irreversible ecological damage are issues that are gaining more critical attention in the world community in the aftermath of Desert Storm.

Despite high technology precision in the delivery of coalition bombs, Iraqi actions (albeit often illegal actions) resulted in the loss of civilians lives. Precision delivery cannot offset either the deliberate or non-deliberate use of civilians as shields. A case-in-point that caused significant attention by the media and the public was the bombing of the communication bunker at Al Firdos.<sup>23</sup>

In addition, damage to the militarily critical infrastructure often has a long term effect on physical facilities that also support civilian purposes. Although the coalition acted according to

internationally accepted laws of war and maximum effort by the coalition was used to limit civilian casualties during the actual fighting, the lasting effect of a campaign designed against the Iraqi infrastructure received some negative assessments. According to one source's tally, "...more than 150,000 have died, but only 10 to 20% of civilian deaths occurred during the actual air and ground war. The efficient destruction of Iraqi's civil support infrastructure by allied forces has left the civilian population without electricity, heat, clean water and medical supplies." <sup>24</sup> A second report by a Harvard study group "estimates 170,000 Iraqi children under five will die" from the lack of food, clean water, medical supplies and sanitation.

In the future, conflicts will be more frequent but at a lower intensity. Missions of peacemaking and peacekeeping appear to be the accepted international mechanisms to end regional hot spots of nationalistic violence. These type of activities short of war do not lend themselves to attacks on infrastructure that will risk high collateral damage or require a long post-conflict recovery time. International imperatives as well as our own American aversion to loss of life demand flexibility in the application of force to include low intensity, non-lethal form. Any military strategy of the future must address this question of the collateral effects to civilian life and property as well as to the long term effect to the global environment..

Visually dramatic during the Gulf War was the unprecedented damage to the environment by Iraq's "ecoterrorism." United Nations Secretary General's Special Representative for Humanitarian affairs noted: "There have been more than three hundred wars since World War

II, none more damaging to the environment than the Gulf War." <sup>25</sup> Direct environmental damage came from two sources: the huge oil slick in the Persian Gulf from Iraqi destruction of oil storage facilities, and soot and smoke caused by the 500 to 600 Kuwaiti oil wells set ablaze. The true nature of the ecological devastation may not be known for generations.

How much more the coalition could have done to prevent or minimize this "ecoterrorism" by the Iraqis is the question. Iraq is not the only rogue government and there are other terrorist organizations that would not hesitate to use this sort of violence for their own designs, particularly if there were little or no means of preventing it.

Does the highly intensive, highly lethal combat of "hyperwar" of Desert Storm represent the nature of combat of the future? Are we learning the correct lessons of the Persian Gulf war or are we overly enamored by the glowing success and seek vindication for failed promises of the past?

#### NonLethal Force

"Nonlethal Weapons Give Peacekeepers Flexibility" <sup>26</sup> as the cover story for Aviation Week & Space Technology may offer a clue to new options for the future. As highlighted in this article, defense research laboratories are developing an array of nonlethal or disabling weapons that may enable the UN and other peacekeeping forces to defend themselves without triggering full-scale conflict. Technologies such as an acoustic weapon that produce sound waves at frequencies and volumes that incapacitate or an "optical flash" to

temporarily blind personnel or sensor systems seem to offer such options.

A second report claims, "disabling technologies" will be a reality by the end of the decade.<sup>27</sup> Peacekeepers armed with Pulsed Chemical Laser weapons would disable enemy soldiers, but not kill them, while simultaneously rendering enemy equipment inoperative. Technologies such as High Power Microwave (HPM) projectiles have the goal of being able to disrupt command and control equipment to a level where it is insufficient to engage in combat. And finally, work is underway with microbes that could turn aviation fuel in storage tanks to jelly or a chemical that sprayed on roads and runways would make rubber tires on vehicles or aircraft brittle and useless.

The potential of these weapons for use in future operations is obvious. They would increase policy makers options and strategies against the full range of potential threats that will characterize the future international landscape.

#### Missions of the Future?

The horror in Bosnia-Herzegovina persists as ethnic rivalry brutalizes the country. Increasingly public outrage, and international frustration with stagnated negotiations demand military action. Vivid memory from the American experience in Vietnam, however, makes the majority of military professionals dubious of a military solution. Undefined political objectives make unclear the suitable military strategy that could halt this civil war. The introduction of ground troops in the numbers required would only offer the risk of a quagmire of protracted war and high casualties.



There are some air power options that have been proposed that may provide alternatives. As outlined by Sen. Sam Nunn, chairman of the Senate Armed Services Committee, "...air power with conventional weapons were among the military options to stop further aggression...We also have some possibilities in the nonlethal technology area... that ought to be looked at carefully and exploited."<sup>28</sup> This theme was echoed by former Air Force Chief of Staff General Michael J. Dugan, when he offered "Operation Balkan Storm: Here's a Plan."<sup>29</sup> Employing nonlethal technology, Dugan advocated using "carbon-fiber strands" to render useless Serbia's electricity grid, without destroying it, so power could be restored following hostilities or turn petroleum products in refineries and tanks to "useless jellies", without destroying the facilities. As he also suggested "that is a war the Serbian's cannot win."

## CHAPTER V

### CONCLUSION

The 21st century will challenge the traditional concepts of military power and further increase the ambiguity between peace and war. We can envision more reliance by international powers on American military power, predominately aerospace power, to assist in humanitarian efforts or to intervene as a peacemaker or peacekeeper. Unfortunately, the recent events in Somalia and Bosnia put military strategists on notice that conventional warfare tactics and capabilities can be frustrated by the complexity of ethnic and nationalistic conflicts. Further, as terrorism and drug trafficking continue to threaten America, future military strategies will increasingly rely on force short of war to counter them. Without clearly defined "centers of gravity", strategic targets or a critical infra-structure, the strategies of a Desert Storm air campaign may be as inappropriate for the future as offensive strategic bombing was inappropriate for Korea or Vietnam. Likewise, ambiguous lines between peace and war may preclude the use of overwhelming force. Casualty rates, for combatants and non-combatants alike, which were considered acceptable in the past will be intolerable in the future. Now is time for the USAF to address the new paradigms of conflict within the post-Cold War framework and develop necessary doctrines and strategies.

America's leadership role nor its requirement to respond in force to the many new kinds of threat of the Post-Cold War

environment will not diminish in the future. The challenge for aerospace strategists is to be prepared. Blurring situations between peace and war are the prototype of future conflict whether quelling an ethnic-cleansing crisis, responding to a terrorist attack or countering the flow of drugs. Too many times in the past, strategy and doctrine have lagged technology. Air Force doctrine was no exception and today's AFM 1-1 falls short from the perspective of activities short of war and this new nonlethal technology.

Today we have the opportunity to provide the vision that will carry aerospace power into the 21st century. Responsibility lies with today's professional air men and women, who understand the potential of aerospace power and who can visualize the unique role it can play in support of America's future security. In the words of warning by an air power advocate from the past,

National safety would be endangered by an Air Force whose doctrines and techniques are tied solely on the equipment and processes of the moment. Present equipment is but a step in progress, and any Air Force which does not keep its doctrines ahead of its equipment, and its vision far into the future, can only delude the nation into a false sense of security."

General H. H. "Hap" Arnold, 1945

<sup>1</sup>Richard H. Shultz, Jr., and Robert L. Pfaltzgraff, Jr., ed., The Future of Air Power in the Aftermath of the Gulf War (Maxwell AFB, Ala.: Air University Press, 1992), p. 109-110.

<sup>2</sup>Abraham Lincoln, Annual Message to Congress, December 1, 1862.

<sup>3</sup>Colin Powell, General, Chairman of the Joint Chiefs of Staff Report on the Roles, Missions, and Functions of the Armed Forces of the United States, February 1993 (Washington, D.C.: U.S. Government Printing Office, 1993) p. V.

<sup>4</sup>Dick Cheney, Annual Report to the President and the Congress, January 1993 (Washington, D.C.: U.S. Government Printing Office, 1993) p.V.

<sup>5</sup> "The Changing Strategic Environment" Defense 92, Nov/Dec 1992, p. 7-8.

<sup>6</sup>Ronald V. Dellums, "America Needs to Define New Strategy for Military," The Christian Science Monitor, 25 March, 1993, p. 19.

<sup>7</sup>Amos A. Jordan, William J. Taylor, and Lawrence J. Korb, American National Security, (Baltimore: John Hopkins Press, 1989) p. 567.

<sup>8</sup>Segei Rogov, "International Security and the Collapse of the Soviet Union," The Washington Quarterly, Spring 1992, pp.15-28.

<sup>9</sup>Benjamin R. Barber, "Jihad vs. McWorld," The Atlantic Monthly, March 1992, pp. 53-55, 58-63.

<sup>10</sup> "Policymaking for a New Era", Foreign Affairs, Winter 1992/93. p., 187.

<sup>11</sup>Russell W. Ramsey, "World Systems, Challenges: 1993-2025," The Officer, April 1993, p. 44.

<sup>12</sup> "The Ingathering Storm of Nationalism," The New Republic Quarterly, Fall 1991, p. 4.

<sup>13</sup>John Lukacs, "The End of the Twentieth Century," Harper's, January 1993, p. 55.

<sup>14</sup> "Fundamentalist fears," US News & World Report, January 11, 1993, p. 29.

<sup>15</sup>Benjamin R. Barber, "Jihad vs. McWorld," The Atlantic Monthly, March 1992, pp. 53-55, 58-63.

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